



## **Building Consistency Meeting**

### Residential

Date: 7/2/2008 Recorder and minutes prepared by: Danny Wooten/Jeff Griffin

**Staff present:** Danny Wooten, Jeff Griffin, Walt Nash, Andrew DeMaury, Jacob Gregory, Scott Linhartt, Patrick Biddy, Randy Newman, Druied Roberson, Steve Kellen, Yates Smith, Andy Herring, Tim Taylor.

**Public present:** Hans Kasak (**Ryland Homes**); Daniel McBride (**Cunnane Group**); Jason Whitener (**Dienst Custom Homes**); Wayne Carter (**Evergreen Homebuilders**); Bob Mckee (**Ryan Homes**); Chris Tucker (**Southern Staircase**); Van Smith (**CP Morgan**); Brian Tunall/Craig Jones (**Vicus Builders**); David Schwieman (**DR Schwieman, Inc**); Adam Danneman (**McCar Homes**); Brad Crysler (**John Weiland Homes**); Rob Merrell (**Griffin Masonry**); John Meeks (**Apple Blossom Insulators**); Dave Reynolds (**Bldrs 1<sup>st</sup> Source**); Byard Stevens (**Johnson Concrete**); Darren Price (**M/I Homes**); A. Wynn Yates (**Yates/Starnes Eng**).

Topics/Subject	Decisions/Conclusions/Actions
<b>Old Business</b>	
Footing rebar	Question asked about the requirement for steel in footers. The Department policy has been that if the plans don't require reinforcement and as per the residential code they are not required, then we would not regulate the installation of the rebar. Designers can list on their plans statements like "2- #4 rebar recommend but not required" and this will not be regulated by the Department. This is an issue above Code minimum requirements and can be installed at the discretion of the builder.
<b>New Business</b>	
Foam used as firestopping	Firestopping using expandable foam is allowed if the product has been approved and tested. If a foam is used to seal holes (firestop) the can or label with the approved NER report must be left on site for review. Builders who use these products are encouraged to review the NER report and pay close attention to limitation of usage. A label from a can that references approved and the NER report can be nailed to a stud or left attached to the plans to be verified, see attached label example of one approved product:



Bowed stair treads	A code change proposal has been put together to address an issue of bowed stair treads used with several stair flight options. A copy of the proposed change was passed out and is attached to the minutes for review and comment back prior to submitting to the Building Code Council.
Retaining wall guards	<p>Question asked about any requirement for retaining walls to have guards on them and a proposal for some Code language with 2 options had been drafted and handed out for review. Since the consistency meeting the residential Ad Hoc and several members of the BCC have decided not to go forward with a change proposal but let the interpretation letter issued by DOI staff address the issue of retaining wall guards. The letter from DOI only requires a guard when there is a dedicated walking surface adjacent to the retaining walls with more than a 30" drop off. The dedicated walking surface can be pavers, a driveway or sidewalk or even a gravel walkway or drive. Grass adjacent to the retaining walls does not constitute a requirement for guards. There is one issue not addressed in the interpretation that may need to be addressed by the consistency team having to do with what distance is needed from that walking surface before a guard is not required, example does a 8" strip of grass between a retaining wall and a paved driveway address the concern or should there be a minimum separation to be considered safe. Issue will be addressed again at next consistency meeting. DOI interpretation as listed below:</p> <p><b>From:</b> David Conner  <b>Sent:</b> Monday, June 30, 2008 10:33 AM  <b>To:</b> 'ken.hyatt@transylvaniacounty.org'  <b>Cc:</b> Timothy Morrison; Bob Speed; Bill Moeller; Mark Bailey; Mike Page; Barry Guppton  <b>Subject:</b> Guards on Retaining Walls</p> <p>Mr. Hyatt</p> <p>It is the purpose of this writing to follow up our phone conversation on June 23, 2008 relative to when retaining walls on residential sites require guards.</p> <p>The 2006 NC Residential Code, Section R101.2 states; "Accessory structures are not required to meet the provisions of this code except decks, gazebos and retaining walls as required by Section R404.1.3." The NC commentary for this code section states; "All decks and gazebos require permits along with retaining walls per section R404.1.3."</p> <p>In accordance with the above, and R404.1.3, it is my opinion that the following residential retaining walls require design and are therefore required to be permitted:</p> <ol style="list-style-type: none"> <li>1. All retaining walls with an unbalanced condition exceeding 48 inches</li> <li>2. All retaining walls that cross over property lines</li> <li>3. All retaining walls that support buildings and their accessory structures</li> </ol> <p>The NC Residential Code, Section R312.1 states; "Porches, balconies, or raised floor surfaces located more than 30 inches (762 mm) above the floor or grade below shall have guards ..... in height." The NC commentary for this section states: "The guard provisions of this code address the issue of providing protection for occupants from falling off of any elevated walking surface."</p> <p>It is my opinion that guards (complying with R312) must be included on any of the above mentioned retaining walls when the finished area on the high side of the wall is more than 30 inches above the grade below and part of an egress route or other dedicated walking surface.</p> <p>I hope this is of assistance to you.</p> <p>David W. Conner, Sr., P.E.  Building Code Consultant  Office of State Fire Marshall  NC Department of Insurance</p> <p>Phone (919) 661-5880 Ext. 229  FAX (919) 662-4414</p>

Exterior sheathing behind brick veneer	Question asked about OSB exposure 1 sheathing behind brick veneer and if felt paper was required. This was a Code change that actually went into effect on January 1 <sup>st</sup> , 2006 and regardless of the air space behind brick veneer all sheathing products must be covered with felt paper or an approved weather resistant material per section R703.2.
Townhouse soffit protection	The building code council is in the process of changing the language dealing with soffit protection on 3 or more attached townhouse units. There was an error in the language dealing with maximum allowed ventilation at the soffit not to exceed 150% of the required ventilation, this should have been 50%. Also the language is not clear as to the intent and they are looking at making it a code requirement and not list it as an exception. The current way we have looked at it is correct the entire soffit line has to be protected but new language to make that clearer should be available shortly.
Requirements for non-required monumental stairs (2 <sup>nd</sup> stairways)	Question was asked about a secondary stairway and does it have to meet the code requirements for the main egress stairway off a level. In the 2002 Code there was a reference in section R314 exception #1 that allowed stairways not required for egress to be as narrow as 26 inches. Since stairway width was the only exception listed then all other aspects of a stairway (when built) must comply with all the requirements like, tread and risers dimensions (including open risers); headroom height; handrail and guard rails; illumination requirements. This includes stairways built off decks and stairs built to unfinished areas that were not required to be present but when built had to comply with all aspects except width which could be reduced to 26". <b><u>In the 2006 Code this exception which was NC language, has gone away.</u></b> The Code no longer addresses stairways that are not required for egress and considers all stairs, regardless if needed or not, would be used for egress. <b>Currently all stairways must comply with all requirements listed under section R311.5 of the NC2006 Code.</b>

# *Rough Draft*

Code change proposal for Bowed stair treads to read as follows:

## *Change:*

**Section R311.5.8 Special stairways.** Circular stairways, spiral stairways, winders, bulkhead enclosure and **bowed tread** stairways shall comply with all requirements of section R311.5 except as specified below.

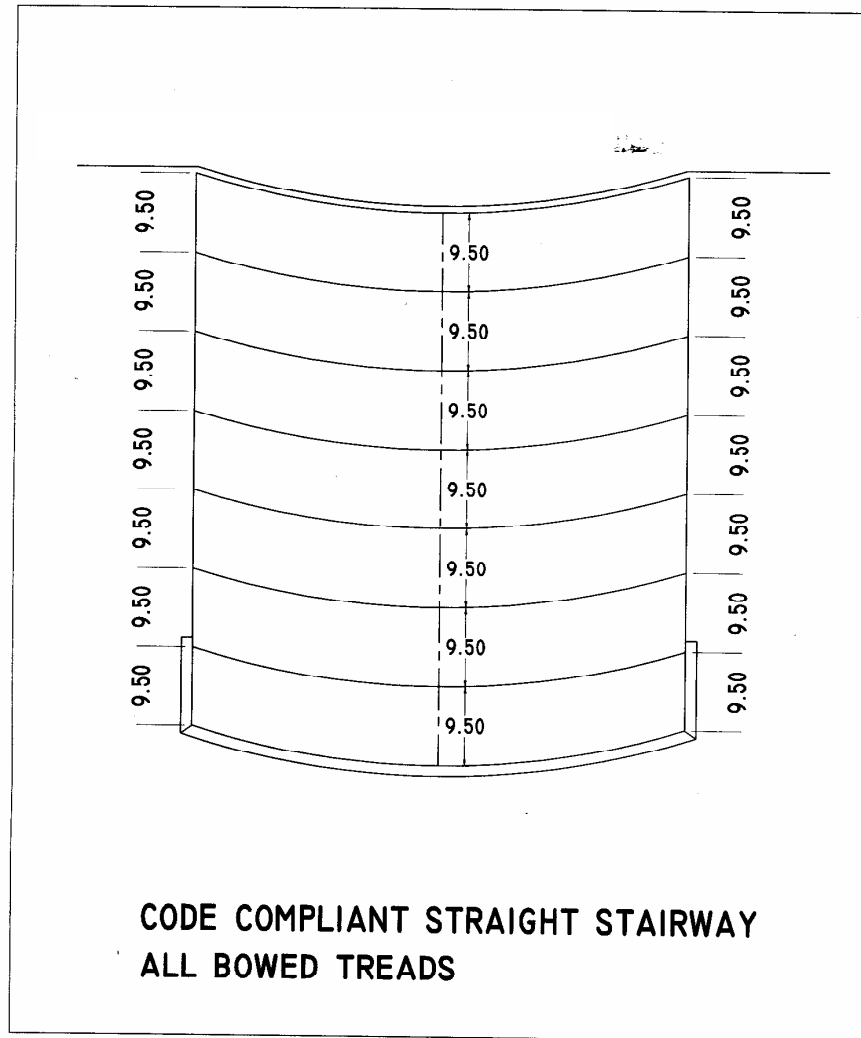
## *Add:*

**R311.5.8.3 Bowed tread stairways.** Bowed tread stairways are permitted provided they are uniform in bowed tread depth along entire width of tread with not more than 3/8" variance from greatest to smallest tread in the stairway flight. At no point shall the tread be less than a minimum of 9 inches with a nosing as listed in section R311.5.3.2 and R311.5.3.3 respectfully.

**R311.5.8.3.1 Standard stairway application.** The bottom 3 treads in a standard stairway application as listed under section R311.5.3.2 are permitted to bow provided at no point along the width of the tread they are less than 9" as measured under section R311.5.3.2 and each bowed tread is uniformed with other bowed treads with no more than 3/8" variance from greatest to least. Nosing is required as listed in section R311.5.3.

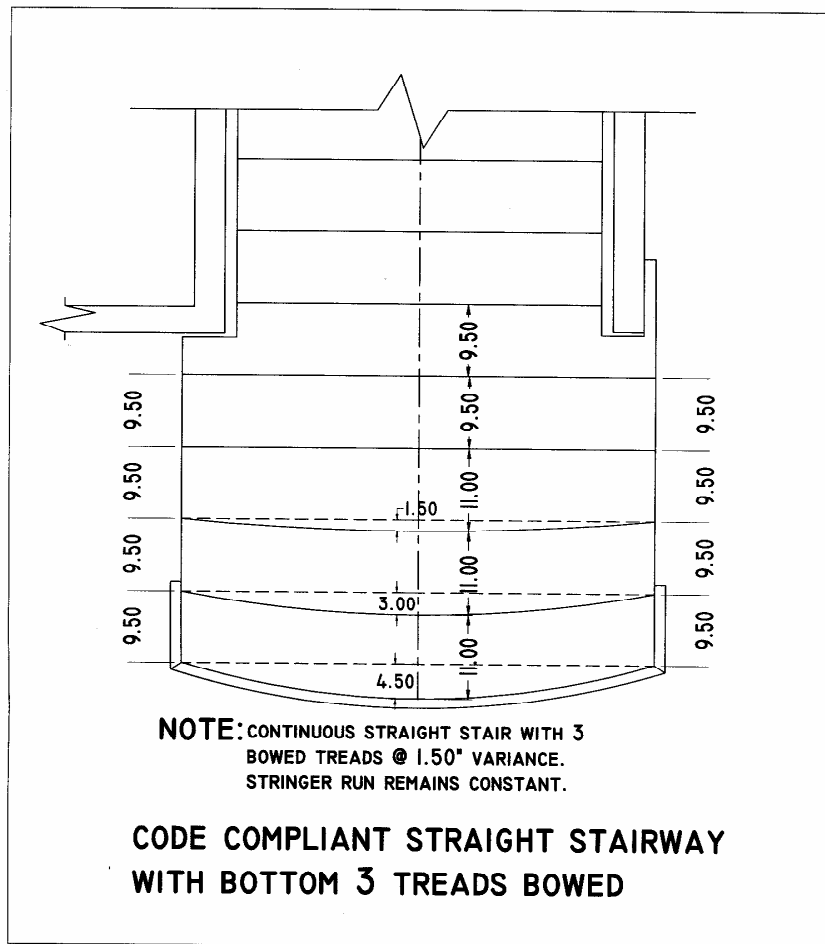
**R311.5.8.3.2 Bowed tread circular stairways.** Bowed treads in a circular stairway are permitted provided they are uniformed as per winder treads as listed in section R311.5.3.2 measured at a point 12" from the side where the treads are narrower. At this walk line bowed treads must be uniformed with other circular stairway treads with the greatest tread not to exceed the smallest by more than 3/8". Nosing is required as listed in section R311.5.3.

**The following to be added to commentary to explain code section application**



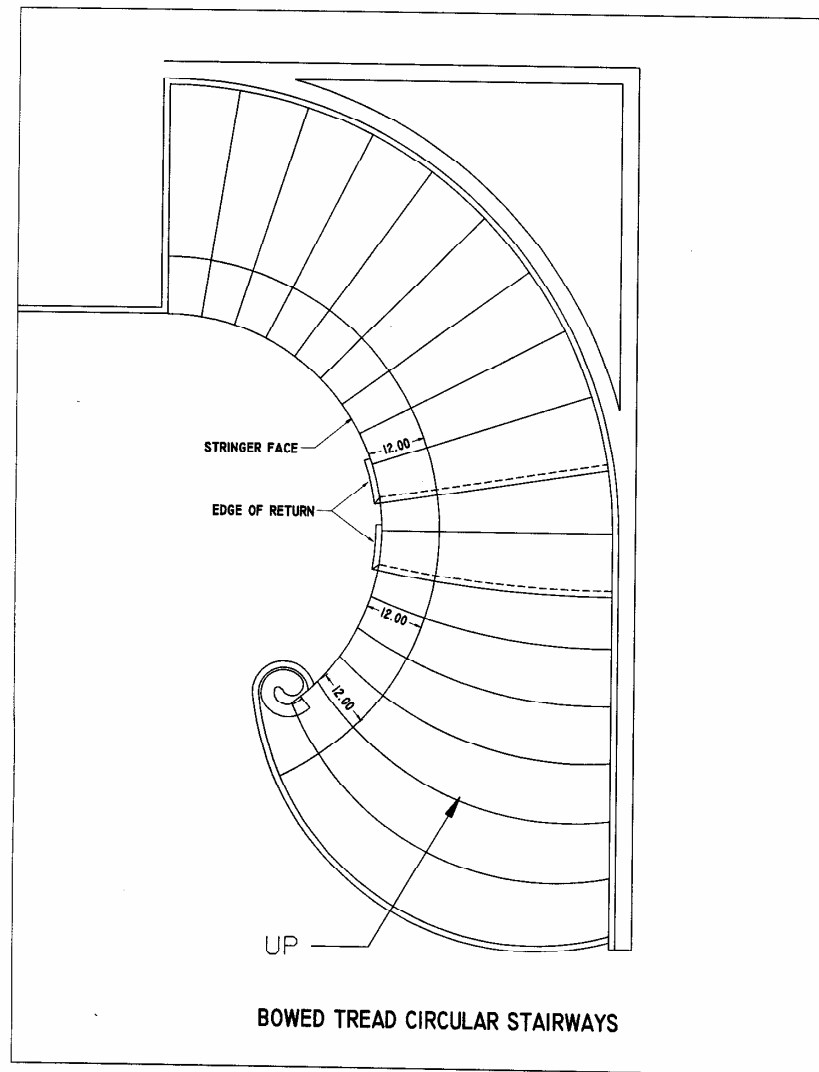
**Figure R311.5.8.3**

**All treads in a straight run stairway can be bowed but must be uniformed for the entire flight of the stairway. Landing at top will be required to bow as well to maintain uniformity at last tread. Each tread must maintain a uniform arch to each tread surface for the entire width of the tread with no more than 3/8" variance from greatest to least within the stair flight.**



**Figure R311.5.8.3.1**

The use of a bowed tread in a standard straight run stairway with rectangular treads is allowed but only in the bottom 3 steps within that flight. Each bowed tread must be uniform with the other bowed treads but not with standard rectangular treads within that flight. No area of bowed tread surface can be less than 9" as measured under section R311.5.3.2 and a nosing is required unless all of the bowed tread surface is greater than 12" as listed under section R311.5.3.3.



**Figure R311.5.8.3.2**

**Bowed stair treads are allowed in a circular stairway application as long as they are uniformed at the walk line as required for winders under section R311.5.3.2. This should be measured off the walkable surface and in some cases the 12" may need to be measured from the face of balusters being installed; typically 16" over from a tread return will accommodate most baluster encroachments. At the walk line both bowed treads and circular treads must be uniformed with no more than a maximum variance of 3/8" from most to least tread depth.**